

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

TrekConnect Inc.

New Jersey Manufacturing Extension Program

Trek Connect Applies Lean Principles to Improve Business

Client Profile:

Trek Connect, Inc., of Moorestown, New Jersey, is a woman-owned small business founded in 1999 by Miriam (Mimi) Jacobs. A veteran of more than 30 years in the connector marketplace, Jacobs capitalized on an opportunity to create her own wire harness and cable assembly business and guided the company to success. Trek Connect employs 28 and currently achieves sales of \$3,500 million annually. The company manufactures cable assemblies, wire harnesses and specialized switching systems for defense contractors, concentrating on the shipbuilding and aerospace industries, commercial OEMs and research institutions. Its focus on producing highly engineered, high-tech, low-volume applications (including data and power transmission systems for shipboard, aerospace and scientific research) has enabled Trek Connect to attract and retain high-profile customers including Northrop Grumman, Lockheed Martin, Raytheon and their respective subcontractors.

Situation:

At the time of introduction to the New Jersey Manufacturing Extension Program (NJMEP), a NIST MEP network affiliate, Trek Connect was seeking ways to streamline operational and administrative processes to accommodate and facilitate growth, achieve competitive lead times, improve on-time performance and maintain quality. The company was contacted by Northrop Grumman's Newport News to participate in its national Supply Chain Initiative, through referral by an existing NJMEP client, Interstate Connecting Components, Inc.

Solution:

NJMEP determined that undertaking a Lean program would best enable Trek Connect to achieve its goals. The course of action consisted of an extensive Lean Assessment (performed in conjunction with VPMEP), followed by the proposal of a project development solution that would best address Trek Connect's needs. This solution comprised future state design of the manufacturing and assembly operations, incorporating associate empowerment, cellular layouts, workplace design, one-piece flow rules and quality at the source. To complement the proposed operational improvements, future state designs also were developed to entail design engineering, quoting, purchasing and other administrative functions. NJMEP secured assistance from third-party resource Tim Swanson, of TSG Associates, to develop and implement this Lean project. The NJMEP Field Agent provided ongoing, on-site support to ensure that required tasks were completed and benchmarks achieved between kaizen sessions (rapid improvements, flows and continuous improvement). The Field Agent also provided ongoing progress review and 5S Workplace Scans to verify Trek Connect's compliance; continually reviewed operations to ensure that flow rules were being maintained in practice; facilitated communication between Trek Connect and TSG Associates; and laid the groundwork for each ensuing kaizen session (developing data, developing agendas).

The project implementation began with all Trek Connect associates attending a one-day Lean Enterprise 101 training session. Next, the operations areas undertook 5S training and implementation;

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Value Stream Mapping, cellular design and single piece flow and ensuing implementation; and the beginnings of supermarket kanbans. 5S and future state implementation are currently underway in the administrative areas. All Trek Connect ownership, senior and middle management and company associates, have participated in all aspects of the Lean project. After a period of approximately 12 months, the 'first wave' of the project--the basic implementation--has been completed. As a result, Trek Connect has essentially become a high-tech job shop, with each job being low-volume or "one-off," and relatively distinct from its predecessors. Thus, direct throughput measurements at the finished good level are hard to quantify. On the individual conductor level, the company has achieved improved visibility of capacity and in-process work and has accelerated throughput in the process cells by 10 percent to 25 percent. Lead time improvement has been difficult to gauge due to growing demand, but on-time delivery has increased from 65 percent to 85 percent (while 85 percent is not an acceptable figure, many late shipments have been due to late engineering changes made by customers). Trek Connect has managed to maintain product conformance levels of 98 percent-plus throughout the implementation. The accelerated throughput has enabled Trek Connect to increase capacity without adding overhead, particularly during spikes in demand. The heightened visibility has improved the utilization of staff.

Trek Connect intends to continue working with NJMEP to complete the company-wide implementation of Lean Enterprise, and also to ensure the success of the 'second wave.' This will include implementation of the initial 'future state' for design engineering, quoting, purchasing and other administrative processes, in addition to 'nailing down' the maintenance of 5S and Lean in the operations process. Management is committed to applying Lean principles to various initiatives, including Lean, 5S, ISO 9000, Safety and employee suggestions.

Results:

- * Accelerated throughput by 10 percent to 25 percent.
- * Improved on-time delivery by 65 percent to 85 percent.
- * Maintained product performance levels of 98 percent-plus.
- * Achieved a more competitive and profitable position.
- * Anticipated on-going relationship with NJMEP to complete company-wide implementation of Lean Enterprise.

Testimonial:

"The Lean implementation in our operations has improved visibility, throughput, accountability and lead times. We are pleased with our progress so far, and we are ready to tackle the difficult issues related to design, quoting and maintaining continuous improvement. NJMEP and TSG have consistently found the right level of communication with management and staff, and the right pace of implementation. Management has been able to rely on NJMEP to facilitate our commitment to Lean Enterprise, helping us to improve while still running our business day-to-day."

Harold M. Heft, General Manager